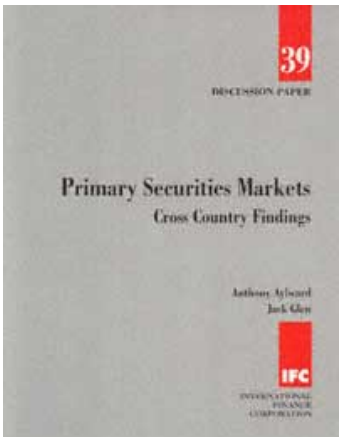

Primary Securities Markets

Primary Securities Markets

Cross Country Findings

Discussion Paper Number 39

Anthony Aylward
Jack Glen

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Anthony Aylward is a financial officer in the Financial Planning and Policy Division and Jack Glen is lead economist in the Corporate Portfolio Management Group of the International Finance Corporation.

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CONTENTS

FOREWORD

This discussion paper focuses on the role of capital markets in the provision of capital for private investment. The paper documents the rise of primary markets for both equity and corporate bonds in a set of 32 countries globally, including a large number of developing countries. As far as we can tell, this is the first such endeavor of its kind. Through their analysis, the authors document a rapidly increasing importance for capital markets in many countries, with equity markets in developing countries on average now sourcing as much private capital through equity markets as their developed country counterparts. This significant revelation is offset by the much lower level of development of corporate bond markets in developing countries. This is pioneering work, presenting new information and important insight into the development of capital markets globally.

GUY PFEFFERMANN
DIRECTOR, ECONOMICS DEPARTMENT
& ECONOMIC ADVISER OF THE CORPORATION

ABSTRACT

This paper examines aggregate primary capital market activity in a cross section of emerging market and developed countries. We analyze data on the value of funds raised domestically via issues of debt and equity securities in public capital markets in 32 countries over the period 198095. There was a dramatic increase in the level of activity over that time, as well as substantial differences in the level of activity across markets and countries. We employ a number of market attributes to explain cross−sectional and time series behavior of equity markets, including cost of capital, liquidity, level of market development, informational requirements and investor protection. Some of those have significant explanatory power in a bivariate analysis, but in a multivariate framework only market depth and accounting standards are significant in explaining equity issuance activity. Notably, we find that domestic debt issuance was closely linked to international debt issuance, whereas no such link existed in the equity markets.

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report data on primary market activity to us and we want to express our gratitude for their efforts.

I— INTRODUCTION

This paper examines aggregate domestic primary capital market activity in a cross section of countries, including 24 emerging markets. Unlike the secondary markets in which existing financial securities are traded between investors, primary markets are the link between issuers of securities and investors. Through primary markets firms (and governments) raise the capital that comprises an important part of their investment financing needs. One contribution of this paper is to define exactly how important a role financial markets have played in raising capital for investment. By compiling aggregate data on primary market activity for a recent period of time, we are able to quantify the size of the markets and how they have evolved over time. As far as we can tell, this is the first attempt to compile and analyze such a comprehensive set of data.1,2

The data suggest that domestic primary markets play a significant role globally in providing capital and that their role has increased over the last 16 years (See Tables A1A9). Over the period 199195, total capital raised in the 32 countries included in our sample was $15.0 trillion, up from $13.4 trillion raised over the preceding decade, 198090.3 Of the recent five−year total, government borrowing represented the largest part, accounting for $6.7 trillion, followed by private sector debt issues equal to $6.2 trillion and debt issues by state−owned enterprises equal to $1.2 trillion. Equity issues were a relatively low $0.8 trillion. Even though the equity number appears small relative to the other components, equity issues averaged 1.5 percent of annual GDP for the countries in the sample. That may not appear to be a large amount, but equity issues were equal, on average, to 25 percent of bank lending to the private sector and represented about 10 percent of total private investment.4 By those standards, the capital raised in domestic primary equity markets is important. Within those global figures, the G4 nations and the four Asian Tigers represent 97 percent of that total, but they also represented more than 85 percent of the total GDP, which still leaves the emerging markets with relatively important primary capital markets.

The remainder of this paper looks more closely at the pattern of behavior of primary capital markets in a broad group of countries over the period 198095. The emphasis is on the 24 emerging markets in the sample, but more developed countries are included in the discussion. For comparative purposes, our analysis also includes reference to international issues of equity and long−term private debt. Our main findings are:

The value of primary market activity by the private sector grew dramatically over 198095. In nearly all countries investigated, issuance in the five years 199195 exceeded total issuance over the preceding decade.

1 Three other sources of primary market information should be noted. For equity issues in emerging markets, IFC's Emerging Market Data Base contains annual aggregate issuance data for some countries for some years, but that information is not actively promoted by IFC because the sources have not been verified. For the fixed income markets, Emerging Bond and Money Market Guide (1995 and 1996 Editions), published by Kleiman International Consultants, provides total amounts outstanding and issued amounts for 199596 for a large number of countries. For international issues of both debt and equity, Bondware has a comprehensive set of data.

2 There is one earlier attempt to describe primary markets in developing countries that we are aware of. Patrick and Wai (1973) analyze data for 13 developing countries over a sample period that covers, roughly, 196070. That study does not differentiate, however, between issues of corporate debt and equity.

3 The sample includes 24 emerging markets, the four Asian Tigers and the G4 countries. A list of the countries is included in Table A2.

4 See Glen and Sumlinski (1998) for detailed information on private investment rates in emerging markets.

In terms of amount of capital raised, issuance of both debt and equity in emerging markets was concentrated in a few of the larger countries. In decreasing rank order, the top 5 countries for equity issuance over 198095 were Thailand, Malaysia, Indonesia, Brazil and Mexico. For private sector long−term debt securities, the top five issuing countries were Mexico, Brazil, Thailand, Malaysia and Chile.

Scaling issue amounts by GDP, the relative importance of primary markets in emerging markets is less concentrated. In 1995, for example, relative to each country's GDP, eleven of the emerging markets had primary equity markets as large as those of the US, and each of those eleven countries' markets were larger than the other three of the G4 countries.

Emerging markets lag furthest behind the developed countries in terms of their private fixed income markets. Although they have grown over the last decade, emerging private debt markets remain only about 12 percent the size of the developed countries in our sample, relative to GDP.

International issues of equity and long−term private debt have also grown rapidly over the period 198095 and represented 20 percent of all equity issues over 199195 and 10 percent of all debt issues, up from marginal levels over 198085.

The remainder of the paper is organized as follows. Section II discusses the data collected for the study. Section III presents an empirical analysis of the determinants of primary market activity. Conclusions appear in Section IV.

II— THE DATA

Data Collection and Sources

Data on new issues of equity and debt securities were obtained by direct survey from national sources, including stock exchanges, central banks and capital markets regulatory authorities. Survey respondents were requested to provide annual data on gross issues of equity and debt securities for the years 198095.

Surveys were sent to 125 capital market organizations in 52 countries. Responses were received from 45 organizations in 32 emerging market economies. New issues data for 4 industrial economies − Germany, Japan, UK and US − were also compiled from published secondary sources. All data sources and contributing organizations are listed in Appendix I. Countries were included in the final sample provided data was available for at least 5 years in at least one of the different categories. In the end, the analysis is limited to 24 emerging markets, the G4 countries and the four Asian Tigers.

As far as possible, we sought to report new issues data that accurately reflects the proceeds raised by the issue. In the case of equity issues, this involves the price at which the share was issued times the number of shares issued. The price of new issues may be recorded as: 1) the par value of the shares; 2) the par value plus any premium on issue; or 3) the secondary market value immediately after or on the day of issue. To the extent possible, we have recorded the issue price, which includes any premium paid over the par value. In the case of debt securities, the two values typically reported are the face value of the issue payable at maturity and the proceeds of the issue calculated as the discounted value of the obligation. To the extent possible, we report only the issue proceeds

amount.

There are two data collection issues that merit discussion. First, the data reported to us are the data recorded by the local authorities. We are not certain of the extent to which these recordings are comprehensive. Two examples will illustrate possible sources of underreporting. In the case of equities, only public issues are recorded in some countries, which means that private placement issues and rights issues made to existing shareholders may not be reported. A similar problem exists for debt issues where, at times, only one tranche of a debt issue will be market listed, while other tranches are traded in over−the−counter, inter−bank or dealer markets. We have no estimate of the extent to which these problems bias the reported figures downward. Issues of government securities likely presented the largest problems of this nature; however, they appear in the analysis chiefly as a memorandum item.

Second, the finite term of debt securities is problematic when comparisons with the volume of equity issues are made. This is a "roll−over problem" that is most acute for short−term debt securities, but is present to some degree for long−term debt securities as well. For example, when focusing on gross issuance volumes over a ten−year period, the volume of ten−year debt issues can be compared to the volume of equity issues since the ten−year debt does not roll−over in this time frame. However, a two−year note that is rolled over five times in ten years will record five times the gross issuance volume as a ten−year note issued once, but will represent the same amount of financing for the issuer.

As the data collected is at annual frequency, all the data tabled on short−term securities are subject to the roll−over problem. In the absence of disaggregated data on the average maturity of each short−term financing instrument that would allow the data to be reported on a constant maturity basis, we have no satisfactory means of dealing with the roll−over problem. One solution would be to work with net issuance of debt securities rather than gross issuance, but this has its own drawbacks because relevant information

bearing on market activity and liquidity would be lost. We resolved to proceed by eliminating short−term debt from the analysis.

The domestic market issuance data used in the analysis that follows are reported in tables A1A9.

Data Trends

a) Global Behavior

The dollar value of issues of debt and equity over the period 198095 is summarized in Table A1 and, for emerging market countries in, Charts 13. Aggregate gross issuance of securities in all countries over 198095 amounted to $28.5 trillion. Globally, government debt accounted for about 45 percent of this total, with private sector debt representing 39 percent, state−owned enterprise debt representing 9 percent and equity 6 percent. Relative to country GDP, the value of capital raised through primary markets grew sharply over the period, increasing from 5.7 percent of GDP over 198085 to 9.5 percent over 199195.

Equity Markets

The global total for issues of equity amounted to $1.8 trillion over 198095. The G4 countries accounted for 83 percent of this total, with the Asian Tigers accounting for 8 percent, and the emerging market countries the remaining 9 percent. In quantitative terms, the volume of issues in the equity markets was relatively small, representing only 6 percent of the global total for all securities, of which 5 percent was issued in the G4 countries. The global volume of equity issuance increased by 137 percent between the first and second half of the 1980s, but from these levels growth in the first half of the 1990s was limited to only 15 percent.

Global equity market activity increased over the 1980s when financial liberalization in the major industrial countries in the early 1980s and strengthening economic activity over most of the decade supported business expansion. In the G4 countries overall, aggregate issues of equity more than doubled from $279 billion in the early 1980s to $611 billion in the second half of the 1980s. Aggregate equity issuance fell sharply in 1990 with the onset of global recession and remained depressed until 1993 when renewed demand for capital goods supported a buoyant market in new issues. For the G4 as a group, there was almost no growth in equity issuance in the early 1990s, however there were striking differences between countries. After reaching high levels in 1988 and 1989, primary equity issuance in Japan fell dramatically in the early 1990s and remained low during the prolonged Japanese recession. In the US, by contrast, equity issuance did not grow appreciably over the 1980s but roughly doubled in volume in the early 1990s.

In the Asian Tigers, the growth in equity issuance activity has followed a similar pattern to that of the G4, except that growth over the 1980s was even more dramatic, with an eight−fold increase in primary market issuance between 198085 and 198690. From a level of around $2 billion per country in the early 1980s, issuance activity rose to a rate of $16 billion per country in the late 1980s, then to $21 billion per country in the early 1990s.5 All of the Tigers saw similar growth occur, however the exceptional $10.6 billion and $21.8 billion new equity issued in Korea in 1988 and 1989 was particularly notable, mirroring the extraordinarily high level of Japanese issuance in those years.

5 Note that no data are available for Hong Kong equity issues for 198089.

In the emerging market countries, equity issuance activity increased 267 percent from a relatively low base between 198085 and 198690. From a level of around $500 million per country on average in the early 1980s, issuance activity rose to a rate of about $2 billion per country in the late 1980s then to nearly $5 billion per country per year in the early 1990s, though most of this activity was concentrated in only a few countries.

Despite the large growth in nominal dollar amounts raised in the equity markets, the size of those markets globally has increased only slightly over the sample period, remaining at around 1 percent of GDP over the entire period under investigation. That global average, however, hides the fact that growth relative to GDP was quite strong in both the emerging markets and the Asian Tigers, albeit from very low bases. This rapid growth has made the equity markets of both the Asian Tigers and the emerging markets slightly larger (relative to GDP) than the G4 countries.

Relative to the size of their domestic stock markets, equity issues remained relatively stable over time at about 6 percent of total market capitalization. Within the three groups of countries, the emerging markets excelled, with equity issues representing 8.6 percent of total stock market capitalization over the period 198095, compared to just 1.9 percent in the G4 countries and 3.7 percent in the Asian Tigers. Moreover, emerging primary equity markets equaled 3.0 percent of total bank loans outstanding to the private sector in their countries − the same as in the Asian Tigers − whereas the comparable number was only 1.5 percent in the G4 countries. By either measure, primary emerging equity markets account for a larger share of total financing activity than is the case in more developed countries.

Government Debt Markets

Issuance of debt by the G4 governments amounted to $12.3 trillion, or 95 percent of the global total, with emerging market government debt accounting for most of the remainder. The global value of debt issued by governments increased by 38 percent in 198690 over 198085, and then by 88 percent over 199195. This sharp increase in government debt issuance during the 1990s occurred in all three country groups.

As a percentage of GDP, the government debt markets in the G4 countries dominate their less developed country counterparts, although emerging market government debt markets have grown faster than the other two sets of countries, especially during the period 198690, and now come close to rivaling the G4 countries. The Asian Tiger government debt markets remain miniscule in comparison.

State−Owned Enterprise (SOE) Debt Markets

Issuance of long−term debt by SOEs amounted to $2.5 trillion over the sixteen years to 1995 and represented 9 percent of the total. Growth in the market was impressive, with issuance over 199195 nearly double the preceding subperiod and roughly equal to the total for the decade 198090. The market was dominated by the G4, which accounted for 97 percent of the total, but growth in the Asian Tigers and Emerging Markets was also impressive. As a percentage of GDP, issuance was well below both government and private debt markets and, except for the G4, below the level of issuance in the equity markets.

Private Debt Markets

Globally, the private long−term debt markets grew rapidly over the sample period, increasing from just $1.3 trillion over 198085 to $6.2 trillion over 199195, an increase of more than 360 percent.

Issuance of private debt in the G4 amounted to $10.7 trillion, or 96 percent of the global total, which is only slightly above the percentage of total government borrowing undertaken by that group of countries.

Total private sector debt issued by the Asian Tigers amounted to $0.3 trillion over 198095, which is equal to 2 percent of the total, nearly double the total for the 23 emerging market countries combined. While total issuance in the emerging markets was only half that of the Asian Tiger countries, the corporate debt market in emerging markets still recorded a tripling in size between the late 1980s and the early 1990s and, in the later period, averaged $24 billion per annum. Relative to their respective GDPs, the debt markets have shown remarkable growth in all three groups of countries, but growth was by far the highest in the emerging markets.

The private debt markets also grew relative to the size of each region's banking sector, nearly doubling on a global basis from 3.7 percent of bank loans outstanding in 198085 to 6.3 percent in 199195. In the Asian Tigers, private debt issues grew to equal 15 percent of bank loans outstanding for 199195, up from only 9.2 percent over 198085. Private debt markets grew in the G4 countries as well, but ended the period at only 9.7 percent of the banking sector. In contrast, even with very strong growth over the period, the emerging market debt markets totaled only 4 percent of their domestic banking sectors in 199195, up from a minimal 1.3 percent over 198085.

b) Emerging Markets

Equity Markets

Issuance of equity in emerging markets was concentrated in a small number of countries, with the top 5 countries accounting for 62 percent of total equity issued. In decreasing rank order, these were: Thailand, Portugal, Malaysia, Indonesia and Brazil. As a percentage of average GDP over 198095, however, three smaller countries − Mauritius, Jordan and Tunisia − are notable for ranking in the top 5. By this measure, the top 5 equity issuers were Portugal − 3.9%, Tunisia − 3.3%, Jordan − 3.2%, Mauritius − 2.9% and Malaysia − 2.8%.

The shifts in the country rankings of equity issuers have been dramatic. Two countries are notable for their climb: Mexico and Indonesia. Both countries ranked low in the early 1980s, but were leading equity issuers by the 1990s. The opening of markets in Sri Lanka and Hungary (and privatization−related equity issuance in the latter country) meant that primary equity issuance rose from zero in the early 1980s in each of these countries to a rate

of $100 million or more by the 1990s.

The top four emerging market equity issuers in the early 1980s − Malaysia, Brazil, Tunisia and Venezuela − all experienced a relative decline in position over time. Similarly, in Jordan equity issuance in the early 1980s at a rate of around $150 million per year diminished to only $40 million per year by the latter half of the decade. Colombia, the Philippines and Tunisia also experienced absolute declines in equity issuance activity over this period, however all three recovered in the early 1990s. In Peru, new equity issuance of $5 million per annum over the 1980s declined to under $1 million per annum by the early 1990s.

Government Debt Markets

Long−term government debt markets in emerging markets grew during the sample period, but remain below the levels of the G4 relative to GDP. Growth took off in 198889 and then again in 1992. In nominal terms, the largest market is Venezuela, followed by Mexico and Portugal. Relative to GDP,

Venezuela also has the largest market, followed by Portugal and Pakistan. Growth of the government debt market has been notable in Hungary, the Philippines, Turkey and Venezuela.

State−Owned Enterprise Long−Term Debt

Issuance of long−term debt by state−owned enterprises was also concentrated, with the top five issuers accounting for 81.8 percent of the total. China alone accounted for 40 percent. Relative to GDP, however, China slips to fifth place, behind Thailand, Greece, Portugal and Chile.

Issuance activity accelerated dramatically over the sample period and the relative importance of issuers changed. In the early 1980s, Mexico was the dominant issuer, but it dropped out of the market completely in the 1990s, as did Peru. In contrast, many other countries saw their markets for SOE debt grow over the sample period both in dollar terms and relative to GDP.

Private Debt Markets

Issuance of private long−term debt was also concentrated among a few issuers, with the top five emerging market issuers accounting for a total of 69 percent of the total. In decreasing rank order these countries were Mexico, Brazil, China, Thailand and Malaysia. As a percentage of GDP, the rankings are Malaysia − 4.2%, Chile − 3.0%, Thailand − 2.3%, Portugal − 1.8% and Mexico − 1.2%.

There were interesting dynamics in the rankings of emerging market issuers of private long−term debt over the three subperiods. By the 1990s, the leading Latin American countries were joined at the top of the rankings by Malaysia and Thailand, two countries where there was zero new issuance of long−term debt by the private sector in the early 1980s. Markets in long−term private debt also grew dramatically in China, Tunisia and Argentina, lifting those countries up the rankings. On the other hand, Jordan and Venezuela experienced significant declines in issuance of long−term debt in the 1990s from earlier levels. Significant market activity has yet to develop in Hungary, Jamaica, Kenya, Mauritius or Sri Lanka.

c) International Issues of Equity and Long−Term Private Debt

In conjunction with the development of domestic markets for debt and equity, international issues of both equity and debt have taken off in recent years. Aggregate statistics on those markets are presented in Table A10.

Equity

International equity issues grew dramatically over the sample period, increasing from only $3.7 billion globally over 198085 to $208 billion over 199195. By far, the bulk of those issues came from the G4 countries, which issued 85 percent of the total. But equity issues were also strong in the emerging markets and Asian Tigers, which saw issues increase from essentially zero over 198085 to $29 and $6 billion respectively over 199195. Growth was fastest in the period 199195, which saw issues in emerging markets increase twenty times its level over 198690, well above the rates of growth for either the G4 or Asian Tiger countries. International issues accounted for 20.5 percent of total issues of equity over 199195, up from only 1 percent over 198085.

Relative to GDP, growth in international equity issuance has also been impressive. Globally, issuance was only marginal over 198085, but increased consistently over the next decade to reach 0.2 percent of GDP over 199195.

Statistically, there is little relationship between the levels of domestic and international issues of equity. In a pooled sample of all countries, a regression of domestic issues on international issues produces an insignificant slope coefficient.

Long−Term Private Debt

As in the domestic markets, international issues of long−term private debt also greatly exceeded international issues of equity. Starting from a low of $114 billion over 198085, global issues increased to $681 billion over 199195, three times the level of equity issues. As with equity, debt issues were dominated by the G4, which accounted for 93 percent of the total, but growth in the emerging market and Asian Tiger countries was impressive. After a decline in emerging market issues over 198690, debt issues increased to $46 billion over 199195, 35 times the level of 198085. Globally, international issues accounted for 10 percent of all debt issues over 199195, up only slightly from the 8 percent that they represented over 198085. In emerging markets, international debt issues accounted for nearly 28 percent of total debt issues, well above the global average and even above the level of international equity issuance.

Relative to GDP, international issues of debt globally have doubled over each of the subperiods, well above the rate of growth of the domestic debt markets. Growth was actually negative relative to GDP in the Aisan Tigers, but issuance activity in those countries remained well above the level of the emerging markets.

In contrast to the equity markets, there is a strong statistical link between domestic and international issues of debt. In a pooled sample of countries, a regression of domestic issues of debt on international issues produces a slope coefficient that is statistically indistinguishable from one.

III—
DETERMINANTS OF EQUITY MARKET ACTIVITY

This section examines determinants of debt and equity primary market activity. The section begins by discussing possible determinants of market activity and then examines the ability of those determinants to explain market activity. The investigations are of two types. First, the relationship between each possible determinant and issuance activity is examined in isolation. Then, the possible determinants are taken as a group in a multivariate approach.

With the exception of macroeconomic factors, the analysis is limited at this stage to equity issuance owing to limitations on the availability of data for debt markets. Ideally each of the factors considered for the equity

markets would also apply to the debt markets, but data on the debt markets is much less readily available. This is especially true of the relevant cost of capital measure, the interest rate, for which no reliable numbers exist for most emerging market countries. Consequently, for market factors, we limit our analysis to the equity markets.

The existing literature on primary markets broadly falls into two camps. First there is the finance literature that considers the average price performance of individual primary market issues, but ignores macroeconomic factors.6 Second, there is the macro−finance literature that considers capital markets in general and their relation to savings, investment and growth in the real sector over time and across countries.7 While addressing these issues, this second literature by and large omits any special consideration of the role of primary debt and equity markets in capital formation and the various factors that influence primary market activity.

The perspective we take in this paper differs from both of these approaches by concentrating on identifying factors that are correlated with primary capital market activity. By identifying such factors, policy makers will then have a clearer understanding of the type of issues that they need to address in order to provide a regulatory framework that is conducive to market development. We also hope that the

analysis will spur additional research on the topic of primary market development.8

Overall, the existing academic literature gives only limited treatment of primary markets and so does not yet provide a clear picture of the likely determinants of primary capital market activity. We perform regression analysis and calculate conditional means to investigate the extent to which aggregate primary equity market activity is correlated with various market attributes, including the informational quality of markets, the cost of debt and equity capital, aggregate leverage in the corporate sector, economic growth prospects, financial market depth and market regulation. Each of these attributes and their corresponding measures are discussed in turn. In every case, the sample includes all countries for which data are available, including the Asian Tigers and G4.

6 See Rock [1986], Grinblatt and Hwang [1989] and Eckbo and Masulis [1995].

7 See Pagano [1992], Gurley and Shaw [1960], Boyd and Smith [1996], and Zervos and Levine [1995].

8 Glen and Madhavan (1998) take a complementary approach by analyzing the case of Peru and the relationship between specific regulatory and institutional features of that market and the issuance of debt and equity instruments.

a) Bivariate Analysis

Economic Growth and Aggregate Investment

For individual companies, growth in GDP and investment should be closely related. As growth occurs, demand for goods increases and capacity constraints become binding. Investment, perhaps financed by issuance of debt or equity, is likely to follow. Exactly when investment and issuance would be expected to occur is unclear. In some cases, issuance could lag well behind growth, in others, firms might issue and invest in anticipation of growth.

Table 1 presents correlations between growth rates of GDP, aggregate investment as a percentage of GDP and issuance of both debt and equity for our sample of countries. To account for possible leads and lags in issuance activity, the correlations were calculated contemporaneously, as well as for a single lead and lag of each of the issuance variables. The table shows that there is very little evidence supporting the hypothesis of a link between either GDP growth or aggregate investment and issuance activity.

Table 1. Correlations Between Growth Rates of GDP, Aggregate Investment and Equity/Debt Issuance

	Lag	Contemporaneous	Lead
GDP			
Equity	−0.05	−0.07	0.03
Debt	−0.03	0.06	0.14
Investment			
Equity	−0.03	−0.05	0.01
Debt	−0.05	0.05	0.20

Information

Information is a key determinant of asset prices and should play an important role in primary market development. Investors should be more willing to invest as better information about investments is made available. Conversely, firms may be opposed to information disclosure as it can have a variety of economic costs. To look at the importance of information on primary equity market activity, we examine the correlation between primary market activity and various indicators of informational quality, including accounting standards, and investor protection laws. Better information should lead to more primary market activity if its impact on investors more than offsets the costs that are implied for issuers.

Comparable data for accounting standards are only available for 19861995.9 Good accounting standards are those judged to be of internationally acceptable quality in so far as key elements in the guidelines produced by the International Accounting Standards Committee (IASC) are adhered to in practice even though accounting authorities in a particular country may not legally oblige companies to comply with the international standards. Poor accounting standards are those that are judged to be in need of significant reform. Over this period there was considerable variation across countries in accounting standards, but relative stability over time within countries.

9 The accounting standards ratings are obtained from IFC Emerging Markets Factbooks.

A change of rating in accounting standards occurred in only four countries for which data is reported: In 1988, Portugal dropped from good to average, and Turkey rose from poor to average; in 1989 Indonesia dropped from average to poor; and in 1992, Jordan and Taiwan both rose from poor to average. Accounting standards are reported to be of good quality in Brazil, Chile, Malaysia, Mexico, Philippines and Sri Lanka. Poor accounting standards are found in China, Indonesia and Kenya.

Empirical evidence on the relationship between accounting standards and equity issuance is presented in Table 2. The analysis employs the use of conditional means, which are the mean levels of equity issuance across all countries, divided into subperiods and subgroups on the basis of accounting standards. The statistics in the table suggest a positive relationship between equity issuance and the level of accounting standards. Countries with higher accounting standards also experienced higher levels of equity issuance activity in all sub−periods. That positive relationship breaks down somewhat, however, when the emerging markets are separated from the other countries. Although the relationship is positive for both the Asian Tigers and G4 countries, equity issuance is highest in those emerging market countries that have average accounting standards, followed by emerging market countries with good accounting standards.

Table 2. Equity Issues/GDP (%) Conditional on Accounting Standards

Accounting Std	198690	199195	198695
Poor	0.8	0.9	0.8
Average	1.1	1.4	1.3
Good	1.2	1.8	1.5

Cost of Capital

The cost of capital should play an important role in primary market activity. As the cost of capital increases (decreases), issuers should be willing to issue less (more) capital. Intuitively, equity issuance activity should be closely related to the market price of equity, which is one measure of cost; higher prices should promote more issuance, lower prices would hinder issuance. Figure 1 provides evidence on this hypothesis for a single country − Argentina. As the figure shows, equity issuance activity was closely related to the level of market prices. In other countries, however, the link is less clear, at least visually, perhaps because market prices reflect not only investors' required return on equity, but also corporate earnings. To see this, consider that market prices reflect both the amount of earnings that a share earns, as well as the cost of those earnings to shareholders. Higher market prices could reflect a change in either the quantity or price of earnings.

To deal with the problems inherent in using stock price as a measure of the cost of equity, we employ a proxy for the cost of capital: the earnings yield (*e/p),* which is closely related to the required return on equity.10 Earnings yields (*e/p)* provide a measure of the relative valuation placed on equity claims on corporate earnings streams and for that reason are considered by many to be a more useful measure of the cost of capital than the market price of shares alone. Their inverse, the price/earnings

10 The cost of capital, *K* e , is related to the *p/e* multiple according to the following formula:

$$k_e = \frac{1 - por}{(p/e)} + g$$

where *por* is the payout ratio and g is the growth rate of earnings. Thus for given earnings growth prospects, the lower the *e/p,* the lower the cost of capital and the greater the incentive to make primary equity issues.

multiple (*p/e)* is more widely quoted, but provides similar information. *P/e* multiples have tended to rise over the last decade; the ratios for the Asian Tigers now average from a high of 25 in Singapore to a low of 16 in Korea, and on average were close to valuations in leading industrial country stock markets. Among the emerging market countries, *p/e* ratios were highest in the Southeast Asian countries, until the recent crash, where they averaged around 20 − again a level comparable to industrial market valuation. In Latin America in 1995 *p/e* ratios ranged from near 20 in Mexico, 18 in Chile and 13 in Colombia to only 8 in Brazil. In the Middle East and North African region, average *p/e* ratios in 1995 ranged from 19 in Jordan to 9 in Turkey.

Figure 2 presents a scatter plot of equity issues versus earnings yields, where each country has an entry for each year in which it had equity issues and an earnings yield was available. The resulting 321 observations show a slightly negative relationship between the two variables. The correlation between the two variables is −0.18, which is statistically significant given the sample size. The sign of the correlation is correct; higher earnings yields reflect a higher cost of equity and coincide with lower levels of issuance activity. But it is clear from both the figure and the estimated correlation that the relationship is not strong. The bivariate analysis clearly fails to

incorporate country specific or other effects that influence issuance behavior. Incorporating country effects alone makes a big difference. In a regression of equity issuance (relative to GDP) on earnings yields, with the inclusion of country fixed effects, the slope coefficient on *e/p* is −0.03 and significant at the 1 percent level. This does not differ greatly from the estimated coefficient without country fixed effects, but the explained variation with fixed effects jumps to 0.35, compared with 0.03 without the fixed effects.

Leverage

The pecking order theory of capital structure suggests that seasoned or initial equity issues will predominate only when high leverage limits recourse to cheaper debt finance. To examine this aspect of a firm's decision to issue equity, we employ an aggregate measure of leverage defined as the ratio of the stock of commercial bank claims on the private sector to the sum of this plus stock market capitalization. The pecking order theory would suggest a positive relationship between leverage and equity issues. Because this measure of leverage includes new equity issues in the denominator and because the decision to issue any security would be based on past data, we lag our leverage measure by one period. Arguably, this measure is flawed because it considers only bank debt, whereas in many of the countries considered there are significant bond markets. Moreover, the book value of bank debt is combined with the market value of equity in the denominator of the leverage measure. For these reasons, the results should be interpreted with caution.

The correlation between equity/GDP and our measure of leverage is −0.26. Although the correlation is not strong, it is notable that the relationship is negative, which is at odds with the pecking order theory. One possible explanation could be framed in terms of a high elasticity of substitution between debt and equity for issuers. If corporate issuers are capital constrained, and default penalties are low, then debt and equity may be close substitutes, regardless of their different risk sharing or cost attributes. Then, ready availability of debt may substitute for equity on the corporate balance sheet.

Financial Market Depth

As markets develop, we expect them to grow both in size and in depth. Separating these two measures is difficult empirically, but one commonly used measure of financial depth is the ratio of stock market capitalization to GDP. That ratio may be viewed as a coarse (inverse) indicator of the level of transactions costs in the capital market based on the argument that the financial sector has a high fixed−cost base and thus per−unit transaction costs decline with the level of financial depth. Financial depth may also

proxy for the stage of economic development, given the positive empirical relationships reported by Levine and Zervos [1996] between market development and growth. Then, according to the model of Boyd and Smith [1996], more mature economies will tend to rely more on equity finance. For these reasons, we expect that primary equity issues should be positively correlated with financial depth.

The correlation between equity issuance relative to GDP and the ratio of market capitalization to GDP is 0.45, suggesting a fairly strong relationship between the level of market development and issuance activity. One problem in interpreting this result is the fact that both variables are ratios relative to GDP, which might induce correlation regardless of the numerators. To address this concern, we examine the relationship between the average level of market development over 198690 with the subsequent average level of equity issuance over 199196. Using these averages the correlation between the ratio of market capitalization to GDP and the ratio of equity issuance to GDP is 0.43. Figure 3 presents a scatter plot of the two variables, with a superimposed regression line, the slope of which is statistically significant at the 5 percent level. There are two notable outliers at the right side of the graph. Japan and Hong Kong both have market capitalization ratios of about 120 percent over the sample period (198690), but the two behaved very differently in terms of subsequent equity issuance. In Japan, the market crashed, which led to low levels of issuance activity, whereas the Hong Kong market produced

returns that averaged 35 percent over the period and led to high levels of issuance activity. The different behavior of these two markets illustrates the problems inherent in a bivariate analysis of the type we are considering.

Market Liquidity

Market liquidity should be capitalized into the cost of equity capital. Higher liquidity implies less risk associated with holding an asset because its makes liquidation less costly. The result should be a negative link between liquidity and the cost of capital, all else equal.

Our measure of market liquidity, defined here as market turnover, is equal to the ratio of secondary market value traded to secondary market capitalization. The main trend over the period 198095 has been towards higher market turnover. In the G4 countries turnover rates rose sharply during the 1980s to levels that were maintained during the 1990s. Average annual stock market turnover in the G4 countries increased from 34 percent in the early 1980s to 76 percent in the early 1990s. In the Asian Tigers, the pattern was similar; average turnover rose from 39 percent in the early 1980s to 69 percent in the early 1990s, but in these countries the rise in turnover occurred quite recently.

The emerging markets are distinguished by significantly lower turnover rates that have shown only a modest increase over time in most countries. Average turnover in the emerging markets surveyed here averaged 20 percent over 198085, 23 percent over 198690, and 29 percent over 199195. In the latter period, the top five most liquid emerging markets were Turkey (109 percent), Thailand (75 percent), Brazil (49 percent), Malaysia (42 percent), and Mexico (39 percent). Note that three of these also ranked among the top five in terms of volume of new equity issues. While higher liquidity was generally associated with higher issuance at the top of the rankings, there were some notable exceptions that suggest that high secondary market turnover by itself is not at all times essential to an active primary market. The Philippines, Pakistan and Chile all ranked among the top ten on volumes of new issues over 199095, but all had relatively low measures of secondary market liquidity.

The empirical evidence on the link between market turnover and equity issuance is very weak. Figure 4 presents a scatter plot of the two variables and shows that there is little visual evidence of a statistical relationship in the sample between the two, a hypothesis that is confirmed by a correlation of only 0.04, which is statistically insignificant.

Market Regulation

Capital markets are often heavily regulated, but not all regulation need be positive. In many of the markets in our sample entry by foreign investors is restricted. To the extent such restrictions increase the required return on capital, issuers will be more reluctant to issue equity. We examine whether the IFC index of entry restrictions is related to primary market activity and expect a negative correlation.

Market entry restrictions may be of several types. Historically, regulatory authorities have restricted market access by investor type (e.g. individuals, corporations or funds), by country of investor origin and by class of shares available to foreigners. There may be outright prohibitions on investment in equity or foreign investment may be subject to discriminatory regulations concerning minimum holding periods or repatriation rights over capital and income. For our indicator, entry restrictions are classified as free where no significant restrictions apply. All other markets are considered to be restricted. Emerging markets with no entry restrictions in 1995 included Brazil, Greece, Hungary, Malaysia, Mexico, Pakistan, Peru and Turkey. All other countries had some type of restriction in place. None of the countries reported on here were classified as completely closed in 1995.

Among the qualitative measures of market quality compiled here, entry restrictions show the most variability over time. While a broad trend toward market liberalization is evident, there is episodic backpedaling on liberalization

of entry in several countries suggesting that foreign investment restrictions are popular policy instruments, perhaps because of their effectiveness in aiding monetary policy management over the business cycle.

Table 3 presents evidence on the statistical relationship between entry restrictions and equity issuance. The conditional means, which condition on the level of entry restriction, suggest that countries with open entry for foreign investors had more equity issuance relative to countries that restricted foreign entry. That result holds for both subperiods and for each of the three subgroups of countries, but the differences between open and restricted markets are limited.

Table 3. Equity Issues/GDP (%) Conditional on Entry Restrictions

	198690	199195	198695
Restricted	0.9	1.4	1.1
Open	1.2	1.5	1.4

Investor protection refers to provisions in the company law and regulations that protect shareholders, including registration rights, voting rights, anti−director rights, minority shareholder rights and mandatory dividend payments.11 To measure investor protection we use an IFC index, which is a judgmental measure of the overall protection afforded to investors in a particular market by the law. Good investor protection conforms to international standards, average quality is somewhat below international standards but adequate to support investment, while countries judged to have poor investor protection are those where there is significant risk of value loss on this count.

There is considerable variation across countries in investor protection but relative stability over time within countries. Unlike the accounting standards measure, where deterioration was evident in some countries, investor protection has tended to remain constant or improve in all countries. Among the

11 La Porta et. al. 1996, *Table 1*.

emerging market economies, in 1995 good investor protection was available in Brazil, Chile, India, Malaysia and Mexico. Investor protection was poor in China and in all other countries it was average. Investor protection improved significantly in only three countries: in 1989, Indian investor protection was re−rated from poor to average; in 1992 Turkish investor protection improved from poor to average, and in 1993, protection for Taiwanese shareholders improved from average to good.

Table 4 presents empirical evidence on the relationship between investor protection and equity issuance. That evidence suggests that countries with average or better investor protection also have higher levels of equity issuance. The relationship is increasing in the level of investor protection; countries with average levels of investor protection had lower levels of issuance than did countries with good investor protection, something that was true in both subperiods.

Table 4. Equity Issues/GDP (%) Conditional on Investor Protection

	198590	199195	198595
Poor	0.5	0.5	0.5
Average	1.0	1.5	1.3
Good	1.3	1.8	1.6

b) Regression Analysis

In this section we analyze determinants of new equity issues using standard multivariate regression techniques. Within this framework, indicators were assembled for each of the 7 categories of independent variables discussed above: the cost of equity capital *(e/p)*, a measure of aggregate leverage in the corporate sector (LEVER), economic growth (GDPGRO), market depth (DEPTH), secondary market liquidity (LIQUIDITY), accounting standards (ACTGSTD), entry restrictions (ENTRY) and investor protection (INVPRO). A standard linear regression model with these eight explanatory variables and fixed country effects dummies is used. Formal tests of the model (not reported) and an analysis of variance (not reported) confirm that, in the general regression, cross−sectional variation in the variables is significant, which suggest the need to incorporate fixed effects into the model.

The data sample for the regression analysis consists of annual data over the 10 year period 198695 on 26 countries: the G4 industrial countries, 4 Asian Tigers and 18 emerging market economies. The criteria used in selecting countries for inclusion in the analysis was the need for a balanced panel structure, thus excluding countries which reported less than 10 years of annual data.12

The results of the regression analysis are reported in Table 5. The significant determinants beyond country effects were found to be stock market capitalization/GDP (DEPTH) and accounting standards. The sign on the stock market capitalization is positive, indicating that primary market activity increases when relative market size rises, which is as expected. The sign on the accounting standards indicator is positive, indicating that improved information from better accounting standards lowers the costs of equity issuance and increases activity. Paradoxically, as in the bivariate analysis, the leverage ratio enters with an unexpected negative sign. Notable is the lack of significance on *e/p* and liquidity.

12 The following countries were included in the regression analysis: Argentina, Brazil, Chile, China, Colombia, Germany, Hong Kong (China), Hungary, India, Indonesia, Japan, Korea, Malaysia, Mauritius, Mexico, Pakisatn, Peru, Philippines, Singapore, Sri Lanka, Taiwan (China), Thailand, Turkey, UK, US and Venezuela.

The country effects (not reported) in the reported regressions may be regarded as the mean levels of the dependent variable, conditional on the choice of country. Variation in these conditional means are not explained by the model. The top five conditional means, in decreasing rank order, are Hong Kong, Jordan, Portugal, Thailand and Indonesia.

Table 5. Regression Coefficients: Equity/GDP

	Coefficient	Std Error	t−Statistic
e/p	0.004	0.022	0.20
LEVER	−0.012	0.009	−1.26
GDPGRO	0.014	0.008	1.68
DEPTH	0.009	0.004	2.59
LIQUIDITY	0.001	0.002	0.59
ACTGSTD	0.011	0.021	2.29
ENTRY	−0.003	0.004	−0.82
INVPRO	−0.001	0.006	−0.13

IV— CONCLUSIONS

Emerging primary markets remain small in absolute volumes, but have grown rapidly in recent years and now often exceed their developed country counterparts in relative terms. This paper documents how the markets have developed over recent years and has examined some of the factors that have influenced their development.

The analysis suggests several directions for future work. Better and more specific measures of primary market regulations need to be formulated. A better understanding is needed of the determinants of both corporate debt and equity issuance and the role that policy makers can play in promoting (and controlling) market development. Finally, more needs to be known about why firms go public and what the relationships are between secondary and primary capital markets on the one hand and economic development on the other.

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APPENDIX 1— DATA SOURCES

A. Data on new domestic issues of equity and debt securities were obtained from national sources, including stock exchanges, central banks and capital markets regulatory organizations. Contributing organizations are below. International issues were obtained from Bondware.

Argentina	−	Bolsa de Comercio de Buenos Aires
Brazil	−	Comissão de Valores Mobiliários, Bolsa de Valores do Rio de Janeiro
Chile	−	Banco Central de Chile, Superintendencia de Valores Y Seguros
China, P.R.	−	China Securities Regulatory Commission
Colombia	−	Superintendencia de Valores, Banco de la República
Hong Kong	−	Hong Kong Monetary Authority
Hungary	−	Hungarian State Treasury, Government Debt Management Agency
India	−	Reserve Bank of India
Malaysia	−	Kuala Lumpur Stock Exchange, Bank Negara Malaysia
Indonesia	−	Capital Market Supervisory Agency (BAPEPAM)
Jamaica	−	The Jamaica Stock Exchange
Jordan	−	Amman Financial Market
Kenya	−	Capital Markets Authority
Korea	−	The Bank of Korea
Mauritius	−	Bank of Mauritius, Stock Exchange Commission
Mexico	−	Bolsa Mexicana de Valores, Comisión Nacional Bancaria y de Valores
Morocco	−	Bank Al−Maghrib, Moroccan Securities Commission
Pakistan	−	Corporate Law Authority, Karachi Stock Exchange (Guarantee) Ltd.
Peru	−	Comisión Nacional Supervisora de Empresas Y Valores

Philippines	−	Bangko Sentral Pilipinas
Portugal	−	Comissão do Mercado de Valores Mobiliários (CMVM)
Singapore	−	Monetary Authority of Singapore
Sri Lanka	−	Colombo Stock Exchange, Securities and Exchange Commission of Sri Lanka
Taiwan, R. C.	−	Central Bank of China
Thailand	−	Bank of Thailand, Securities and Exchange Commission, The Stock Exchange of Thailand
Tunisia	−	Conseil du Marché Financier
Turkey	−	Capital Market Board of Turkey
Venezuela	−	Comisión Nacional de Valores
Mexico	−	Banco de México
Germany	−	*OECD Financial Statistics Monthly*
Japan	−	*OECD Financial Statistics Monthly*
United States	−	*OECD Financial Statistics Monthly*
Brtiain	−	*OECD Financial Statistics Monthly*

B. Data on stockmarket price−earnings ratios, stock−market capitalization, value−traded, accounting standards, investor protection, entry restrictions, and number of listed companies obtained from the IFC Emerging Markets Data−Base (EMDB) and *IFC Emerging Stock Markets Factbook*, 198796, where available and from national sources otherwise.

C. Exchange rates and GDP were sourced from Global Development Indicators, published by the World Bank, 1997.

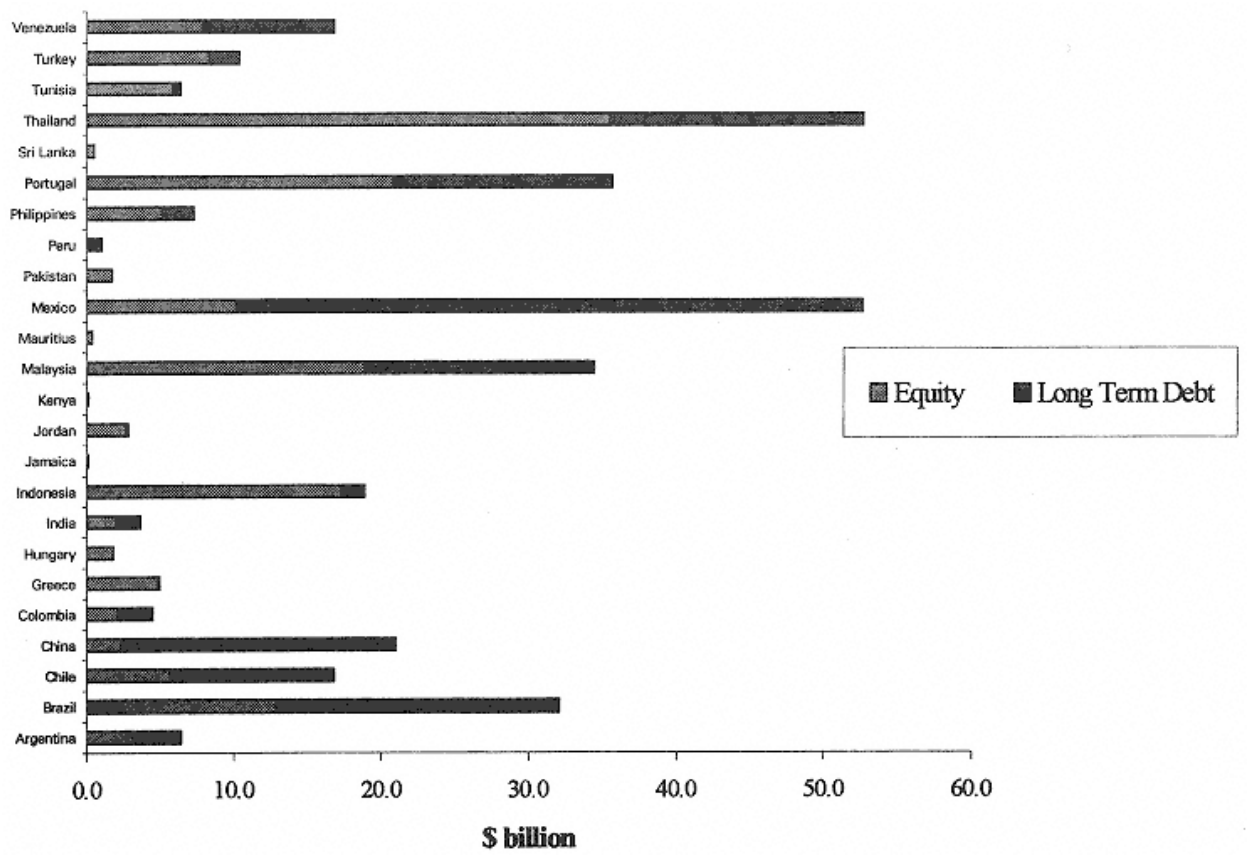

Chart 1.
Private Sector Domestic Primary Market Activity 198095

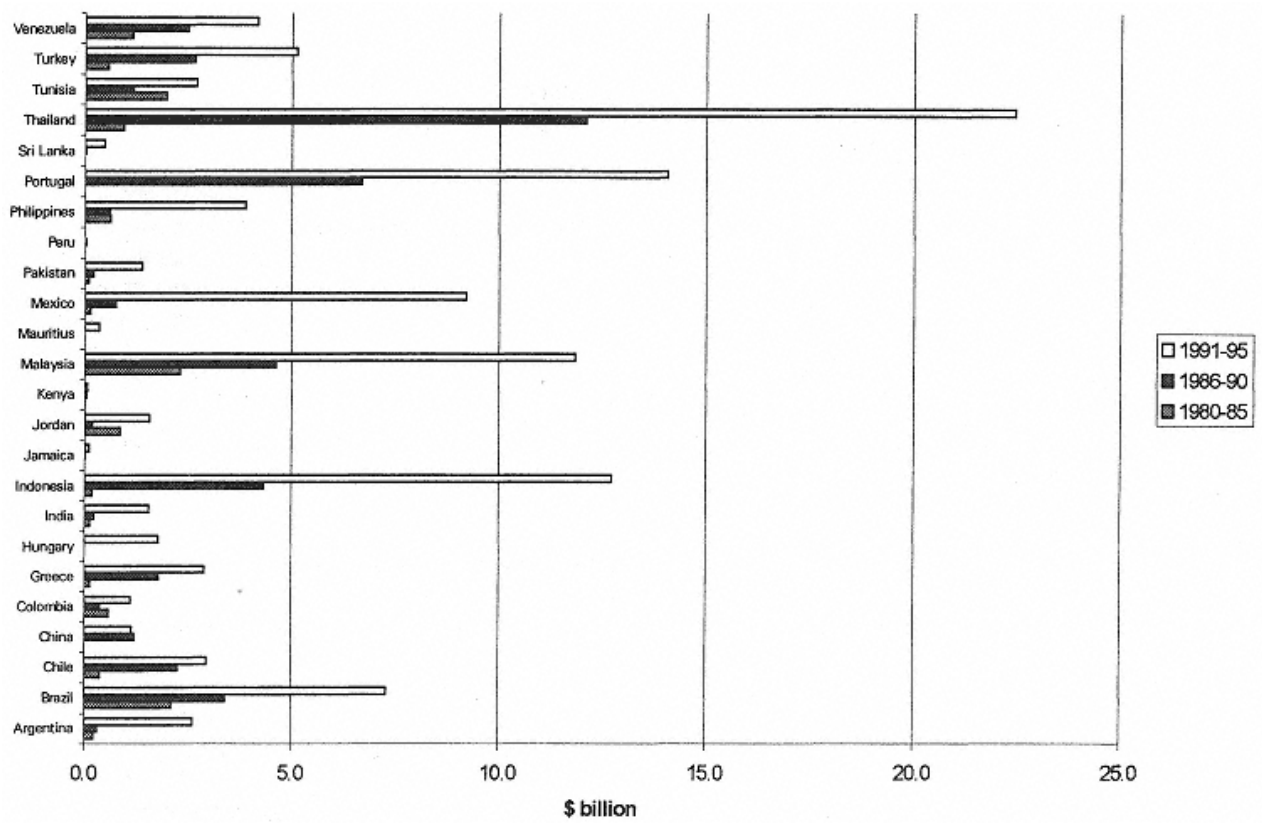

Chart 2.
Equity Issues in Emerging Markets

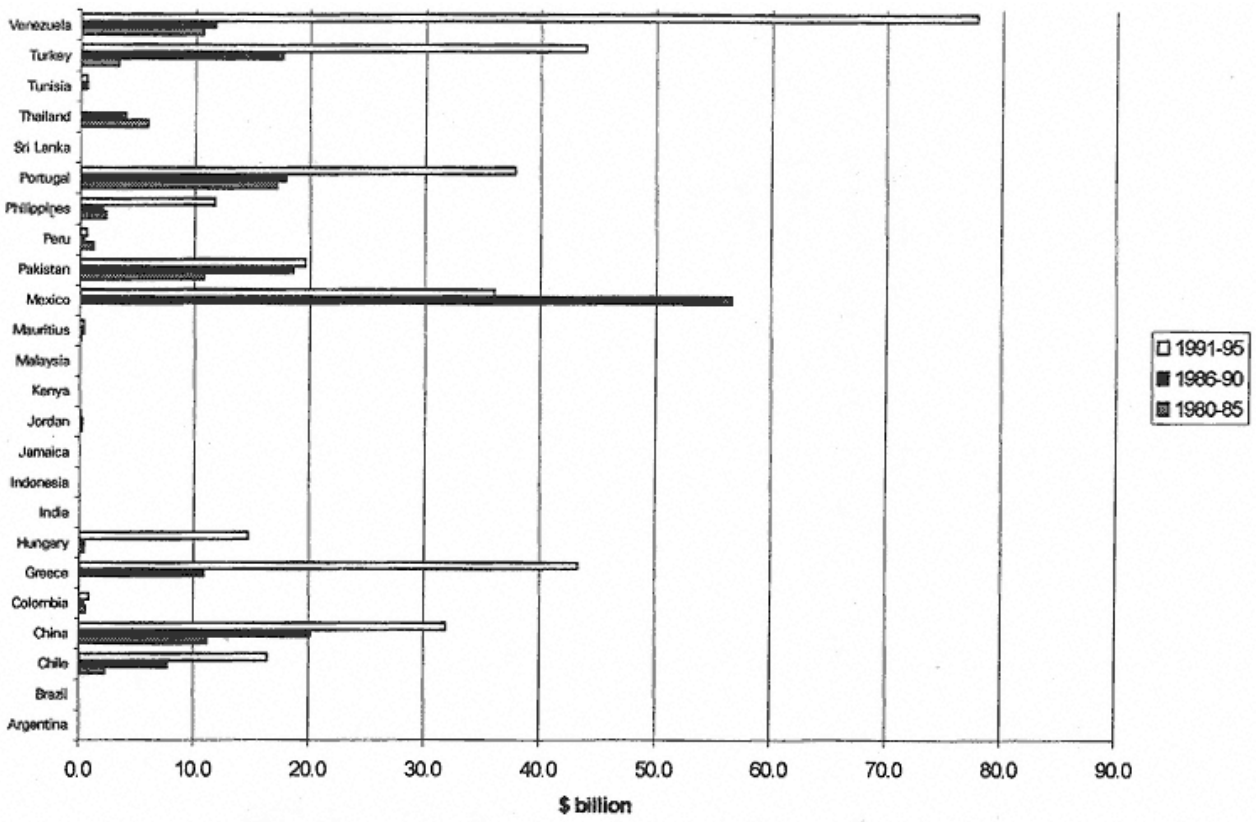

Chart 3.
Long−term Debt Issued in Emerging Markets

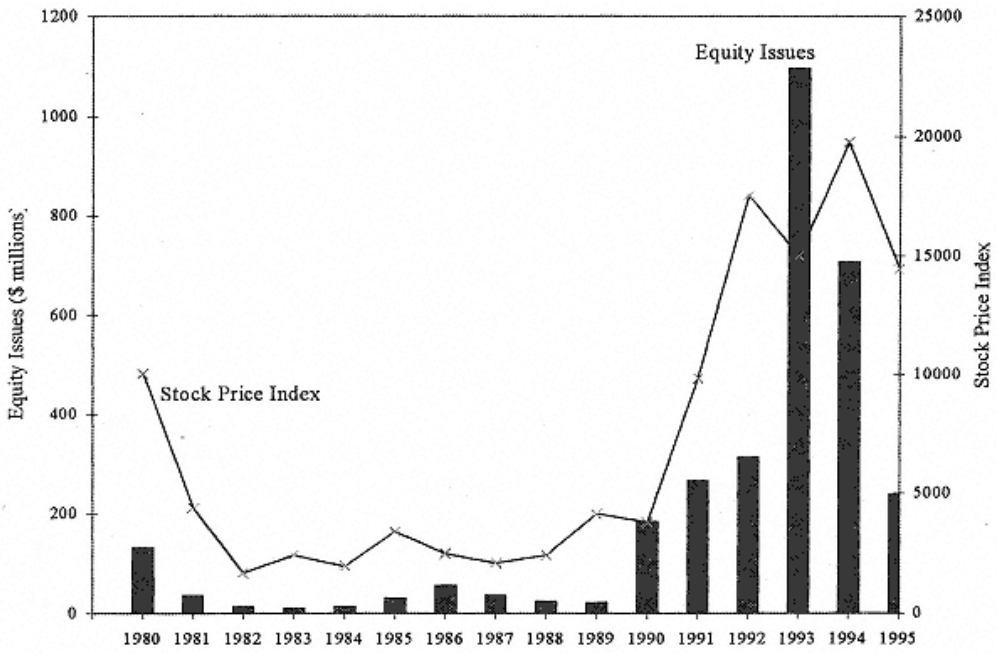

Figure 1.
Argentina − Stock Prices and Equity Issues

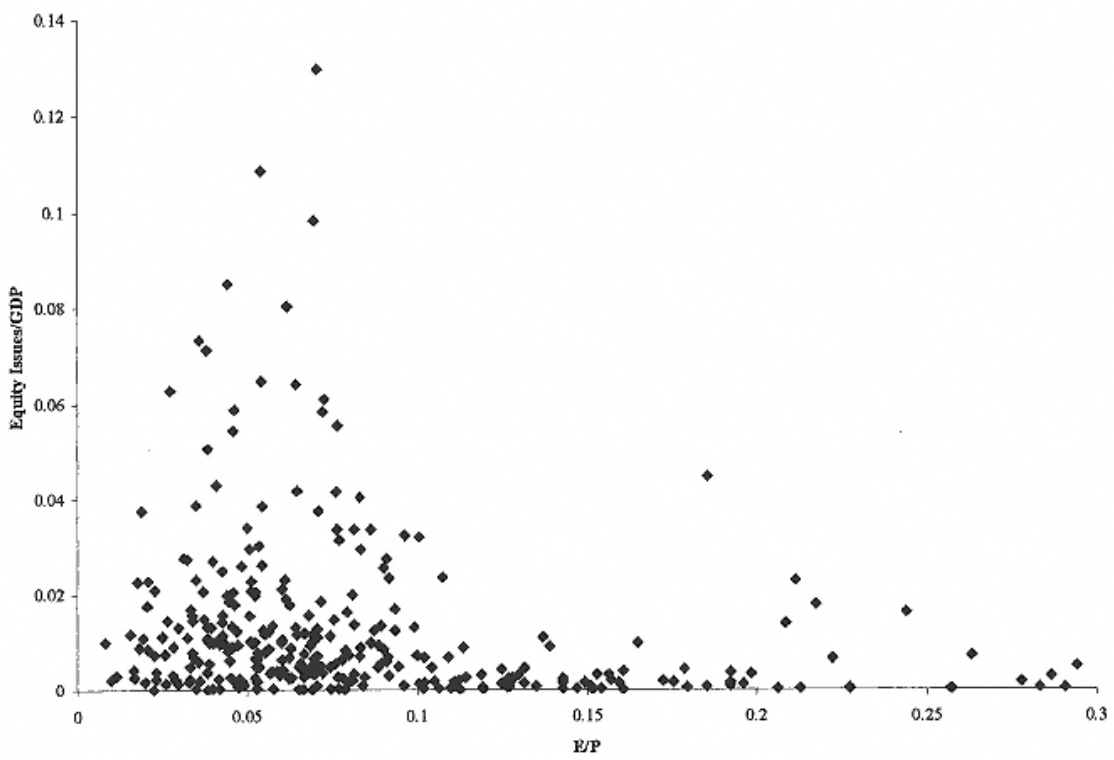

Figure 2.
Earnings Price Ratio and Equity Issues

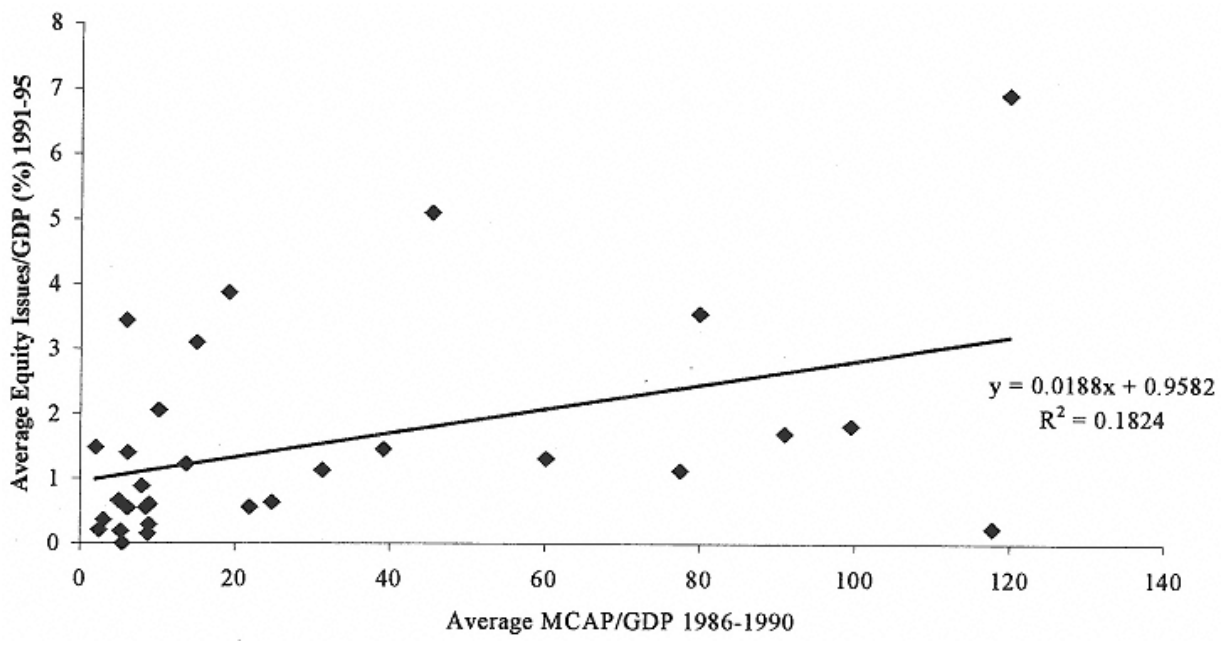

Figure 3.
Financial Market Depth and Equity Issuance

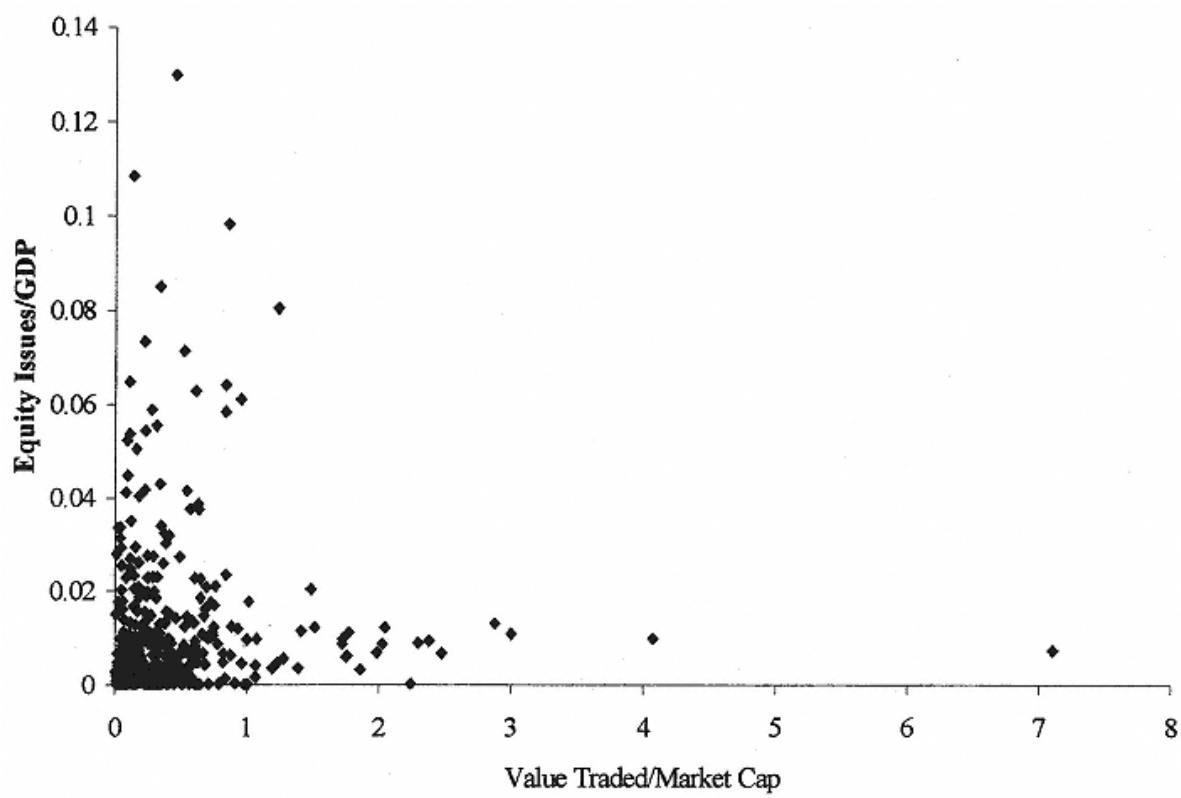

Figure 4.
Market Liquidity and Equity Issues

Table A1. Primary Market Activity

		US$ billion				% of GDP			
Equity		198085	198690	199195	198095	198085	198690	199195	198
	Emerging markets	12.4	45.6	111.5	169.5	0.6	0.7	1.4	0.9
	Asian Tigers	5.4	48.3	83.0	136.7	0.7	1.5	2.8	1.7
	G4	278.7	610.6	613.3	1502.6	0.7	1.4	1.0	1.0
	Total	296.5	704.4	807.8	1808.7	0.6	0.9	1.5	1.0
LT Govt Debt									
	Emerging markets	66.0	169.4	335.5	570.9	2.7	3.3	5.3	3.7
	Asian Tigers	2.3	9.8	46.4	58.6	0.4	0.8	1.4	0.8
	G4	2527.2	3414.3	6366.6	12308.1	5.8	5.6	7.9	6.5
	Total	2595.4	3593.6	6748.5	12937.5	3.1	3.5	5.2	4.0
LT SOE Debt									
	Emerging markets	4.0	18.1	37.4	59.6	0.1	0.2	0.3	0.2
	Asian Tigers	4.2	2.7	20.2	27.1	0.3	0.1	0.4	0.3

	G4	589.2	668.7	1190.8	2448.7	1.1	1.1	1.7	1.3
	Total	597.4	689.6	1248.4	2535.4	0.4	0.3	0.5	0.4
LT Private Debt									
	Emerging markets	9.4	33.6	120.3	163.3	0.2	0.6	0.9	0.6
	Asian Tigers	19.8	63.0	179.2	262.0	2.4	2.5	3.6	2.8
	G4	1308.3	3525.3	5910.8	10744.3	4.8	6.8	7.6	6.4
	Total	1337.5	3621.9	6210.3	11169.6	1.6	1.9	2.2	1.9
Grand total		4826.8	8609.5	15015.0	28451.3	5.7	6.6	9.5	7.3

Table A2. Equity Issues in $ billions

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1980-85	1986-90	1991-95	1980-95
Emerging Markets																				
Argentina	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.3	0.3	1.1	0.7	0.2	0.2	0.3	2.6	3.2
Brazil	0.4	0.2	0.3	0.2	0.5	0.5	1.2	0.4	0.4	0.7	0.8	0.8	0.9	0.8	2.6	2.1	2.1	3.4	7.3	12.8
Chile					0.1	0.3	0.2	0.9	0.6	0.3	0.3	0.2	0.5	0.8	0.1	1.4	0.4	2.3	3.0	5.6
China		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.2	0.1	0.1	0.2	0.7	0.1		0.0	1.2	1.1	2.3
Colombia	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.2	0.6	0.4	1.1	2.1
Greece	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	1.2	0.8	0.2	0.4	1.1	0.4	0.1	1.8	2.9	4.8
Hungary			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.4	1.0	0.0	0.0	1.8	1.8
India		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.4	0.4	0.7		0.1	0.2	1.6	1.9
Indonesia	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.1	0.5	1.1	2.3	4.8	3.9	0.2	4.3	12.7	17.2
Jamaica	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Jordan	0.2	0.2	0.3	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.7	0.5	0.9	0.2	1.6	2.6
Kenya					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Malaysia	0.1	0.4	0.3	0.5	0.8	0.2	0.2	0.3	0.4	0.6	3.1	1.0	3.1	1.3	2.7	3.7	2.3	4.6	11.8	18.8
Mauritius											0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.4	0.4
Mexico	0.0	0.1			0.0	0.0	0.0	0.5	0.1	0.0	0.2	3.4	1.6	2.4	1.8	0.0	0.1	0.8	9.2	10.1
Pakistan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.1	0.6	0.2	0.1	0.2	1.4	1.7
Peru	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Philippines	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.1	0.4	1.5	1.5	0.6	0.6	3.9	5.1
Portugal							0.3	0.9	1.4	1.4	2.7	2.1	3.1	2.6	2.0	4.3	0.0	6.7	14.1	20.7
Sri Lanka								0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.5	0.5
Thailand	0.1	0.1	0.1	0.1	0.4	0.2	0.1	1.2	0.4	5.2	5.2	6.3	8.9	1.3	3.3	2.6	0.9	12.1	22.4	35.5
Tunisia	0.1	0.6	0.3	0.4	0.4	0.2	0.3	0.1	0.2	0.2	0.4	0.4	0.5	0.4	0.4	0.9	2.0	1.2	2.7	5.8
Turkey			0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.5	1.6	1.1	0.8	0.9	1.3	1.1	0.6	2.7	5.1	8.3
Venezuela	0.3	0.1	0.2	0.3	0.1	0.1	0.3	0.2	0.8	0.7	0.5	1.2	0.8	0.8	0.7	0.7	1.1	2.5	4.2	7.8
Total	1.7	2.3	1.6	2.1	2.7	2.0	3.0	5.6	5.8	11.2	20.0	18.9	23.7	17.7	26.4	24.8	12.4	45.6	111.5	169.5
Asian Tigers																				
HongKong					0.0	0.0	0.0	0.0	0.0	0.0	2.4	4.8	13.1	9.9	5.5	4.9	0.0	2.4	38.1	40.5
Korea	0.3	0.4	0.4	0.6	0.6	0.3	1.0	2.3	10.6	21.8	4.1	3.7	3.0	4.1	7.8	8.1	2.6	39.9	26.6	69.1
Singapore	0.2	0.3	0.2	0.2	0.0	0.1	0.0	0.3	0.1	0.1	0.5	0.2	0.3	3.6	0.9	0.5	0.9	0.9	5.5	7.3
Taiwan	0.5	0.2	0.3	0.2	0.4	0.3	0.4	1.0	1.1	1.5	1.2	2.0	2.0	2.5	3.1	3.2	1.8	5.1	12.8	19.8
Total	0.9	0.9	0.9	0.9	1.0	0.7	1.3	3.6	11.8	23.4	8.2	10.6	18.4	20.0	17.3	16.7	5.4	48.3	83.0	136.7
G4 Industrial Countries																				
Germany	3.8	2.4	2.4	2.8	2.2	3.7	7.5	6.6	4.3	10.3	17.3	8.0	11.0	11.8	18.0	16.5	17.5	46.1	65.3	128.9
Japan	6.8	10.8	8.6	7.1	10.0	10.0	14.9	42.5	65.9	108.8	43.1	10.6	4.6	11.5	13.9	10.6	53.4	275.2	51.2	379.7
United Kingdom	2.2	3.8	1.9	3.7	2.2	5.7	11.2	25.9	10.3	11.3	6.7	18.8	10.3	24.4	21.5	11.2	19.5	65.4	86.3	171.2
United States	22.7	25.3	30.7	51.5	22.6	35.5	61.9	53.4	39.9	32.7	36.0	70.6	84.5	116.2	66.3	73.0	188.3	223.9	410.6	822.8
Total	35.5	42.4	43.7	65.2	37.0	54.9	95.5	128.4	120.4	163.1	103.1	108.0	110.5	163.9	119.7	111.3	278.7	610.6	613.3	1502.6
Grand Total	38.2	45.6	46.2	68.2	40.7	57.6	99.9	137.6	137.9	197.7	131.3	137.5	152.5	201.6	163.4	152.7	296.5	704.4	807.8	1808.7

Table A3. LT Government Debt Issues in $ billions

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1980-85	1986-90	1991-95	1980-
Emerging Markets																				
Argentina																	0.0	0.0	0.0	
Brazil																	0.0	0.0	0.0	
Chile					1.1	1.1	0.7	1.7	1.5	1.2	2.7	5.2	4.2	0.9	2.3	3.8	2.3	7.7	16.4	
China		2.9	2.3	2.1	1.8	2.1	1.8	3.1	5.1	5.9	4.1	5.3	8.4	6.6	11.7		11.2	20.1	31.9	
Colombia	0.0	0.2	0.1	0.2	0.1	0.0	0.0	0.2	0.1	0.1	0.0	0.1	0.1	0.4	0.1	0.2	0.6	0.4	0.9	
Greece							0.2	0.8	1.2	3.1	5.7	3.8	7.2	12.9	5.6	13.7	0.0	10.9	43.3	
Hungary			0.2	0.0	0.0	0.1	0.0	0.2	0.0	0.3	0.0	0.2	3.3	5.2	3.1	2.9	0.4	0.5	14.7	
India																	0.0	0.0	0.0	
Indonesia																	0.0	0.0	0.0	
Jamaica																	0.0	0.0	0.0	
Jordan	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.1	
Kenya																	0.0	0.0	0.0	
Malaysia																	0.0	0.0	0.0	
Mauritius	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.4	
Mexico								0.4	9.1	27.7	19.3	10.0	7.4	5.0	4.4	9.1	0.0	56.5	36.0	
Pakistan	0.7	1.2	3.1	0.5	2.4	2.9	4.3	2.0	4.2	3.5	4.6	6.0	3.4	5.9	4.2		10.8	18.5	19.6	
Peru	0.2	0.5	0.0	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.2	1.1	0.4	0.6	
Philippines	0.3	0.5	0.9	0.4	0.1	0.0	0.3	0.4	0.6	0.3	0.3	1.4	1.4	4.2	1.6	3.1	2.3	2.0	11.7	
Portugal	4.2	3.2	2.3	1.9	2.1	3.3	1.9	2.4	4.1	3.7	5.9	10.4	6.0	6.8	4.6	9.9	17.0	17.9	37.8	
Sri Lanka																	0.0	0.0	0.0	
Thailand	0.7	0.7	0.9	1.3	1.0	1.2	1.2	1.1	1.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	5.9	4.0	0.0	
Tunisia										0.3	0.3	0.1	0.1	0.0	0.2	0.1	0.0	0.6	0.5	
Turkey			0.4	0.9	0.6	1.6	2.2	3.2	2.7	4.5	5.0	3.3	9.6	14.2	7.6	9.3	3.4	17.6	43.9	
Venezuela	0.0	0.0	3.5	1.5	2.3	3.4	2.4	0.8	1.0	1.0	6.5	11.1	20.1	5.8	24.9	16.0	10.7	11.7	77.8	
Total	6.2	9.3	13.8	9.0	11.7	16.0	15.2	16.2	30.7	52.2	55.1	57.0	71.4	68.0	70.7	68.4	66.0	169.4	335.5	
Asian Tigers																				
HongKong												0.1	0.3	0.3	0.6	0.8	0.0	0.0	2.1	
Korea	0.0	0.2	0.5	-0.2	-0.1	-0.3	0.0	0.2	0.3	0.7	0.3	0.4	1.2	1.4	2.9	1.7	0.1	1.4	7.5	
Singapore																	0.0	0.0	0.0	
Taiwan	0.0	0.3	0.5	0.3	0.2	0.8	1.0	1.7	2.7	2.5	0.5	7.8	9.9	8.7	5.6	4.7	2.2	8.4	36.8	
Total	0.0	0.5	1.0	0.1	0.0	0.6	1.0	1.9	2.9	3.2	0.8	8.3	11.4	10.4	9.1	7.3	2.3	9.8	46.4	
G4 Industrial Countries																				
Germany	12.0	11.3	17.0	16.9	16.2	19.3	33.8	45.2	41.4	35.1	79.7	81.5	135.7	119.6	69.1	104.2	92.8	235.2	510.2	8
Japan	72.8	82.5	74.2	103.6	92.6	100.6	157.7	204.5	218.2	208.8	297.9	306.1	378.6	525.8	622.2	793.9	526.2	1087.0	2626.6	42
United Kingdom	36.7	27.2	20.0	23.7	19.7	19.9	22.0	23.6	13.4	0.0	0.0	22.7	49.6	87.3	49.7	44.3	147.2	59.0	253.6	4
United States	178.5	212.2	272.3	304.0	370.7	423.3	423.7	401.8	346.9	402.5	458.2	546.8	615.3	635.2	568.0	610.8	1761.0	2033.1	2976.1	67
Total	300.0	333.2	383.5	448.2	499.2	563.1	637.2	675.1	619.9	646.3	835.8	957.2	1179.2	1367.9	1309.0	1553.3	2527.2	3414.3	6366.6	123
Grand Total	306.2	343.0	398.3	457.3	511.0	579.6	653.4	693.3	653.5	701.7	891.7	1022.5	1262.0	1446.3	1388.8	1628.9	2595.4	3593.6	6748.5	129

Table A4. LT SOE Debt Issues in $ billions

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1980-85	1986-90	1991-95	1980-95
Emerging Markets																				
Argentina																	0.0	0.0	0.0	0.
Brazil	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	3.0	0.5	0.0	1.1	0.1	1.0	0.5	0.9	0.4	3.5	3.5	7.
Chile					0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.4	0.5	0.1	0.6	1.7	2.
China		0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.1	1.8	1.7	4.6	9.5	0.3	0.4		0.0	9.3	14.8	24.
Colombia																	0.0	0.0	0.0	0.
Greece												0.6	0.3	1.1		0.7	0.0	0.0	2.7	2.
Hungary																	0.0	0.0	0.0	0.
India						0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.0	0.2	0.1		0.0	1.1	0.6	1.
Indonesia				0.2	0.1	0.1	0.0	0.1	0.2	0.2	0.3	0.1	0.5	0.5	0.1	0.6	0.3	0.8	1.7	2.
Jamaica																	0.0	0.0	0.0	0.
Jordan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.
Kenya																	0.0	0.0	0.0	0.
Malaysia																	0.0	0.0	0.0	0.
Mauritius	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Mexico	0.2	0.2	0.4	0.4	0.1	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.6	0.0	2.
Pakistan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..	..	0.0	0.0	0.0	0.
Peru	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.
Philippines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.
Portugal	0.0	0.0	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.7	0.3	0.5	0.3	0.6	1.0	0.5	1.5	2.9	4.
Sri Lanka																	0.0	0.0	0.0	0.
Thailand					0.0	0.1	0.2	0.1	0.1	0.1	0.3	1.3	1.1	2.4	2.3	2.2	0.1	0.6	9.2	10.
Tunisia										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Turkey			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Venezuela	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Total	0.3	0.4	0.7	0.8	0.4	1.4	1.0	2.6	7.9	3.3	3.4	8.7	12.2	6.1	4.4	6.1	4.0	18.1	37.4	59.
Asian Tigers																				
HongKong	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Korea	0.2	0.7	1.3	0.4	0.6	0.3	0.2	0.2	-0.4	0.0	1.2	3.4	5.4	5.5	1.3	2.8	3.5	1.3	18.5	23.
Singapore																	0.0	0.0	0.0	0.
Taiwan		0.1	0.2	0.1	0.2	0.1	0.3	0.3	0.2	0.1	0.5	0.6	0.4	0.1	0.4	0.2	0.8	1.4	1.7	3.
Total	0.2	0.8	1.5	0.5	0.9	0.4	0.6	0.5	-0.1	0.1	1.7	4.0	5.9	5.7	1.7	3.0	4.2	2.7	20.2	27.
G4 Industrial Countries																				
Germany	3.2	2.4	2.7	1.7	1.8	2.2	3.7	7.6	3.2	1.5	7.7	8.5	27.4	61.6	61.7	0.7	14.0	23.7	159.9	197.7
Japan	18.7	21.6	23.0	25.1	27.7	25.9	41.9	39.0	54.2	50.1	66.4	92.8	70.9	79.5	92.6	89.7	142.1	251.7	425.5	819.3
United Kingdom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
United States	34.3	35.2	57.9	63.6	80.3	161.7	89.8	65.3	78.5	77.9	81.8	99.2	136.4	189.5	92.2	88.1	433.0	393.3	605.4	1431.7
Total	56.3	59.2	83.5	90.5	109.9	189.8	135.5	111.8	136.0	129.5	155.9	200.5	234.7	330.5	246.5	178.5	589.2	668.7	1190.8	2448.7
Grand Total	56.7	60.5	85.7	91.8	111.1	191.6	137.0	114.9	143.8	132.9	161.1	213.2	252.7	342.3	252.5	187.6	597.4	689.6	1248.4	2535.4

Table A5. LT Private Sector Debt Issues in $ billions

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1980-85	1986-90	1991-195	1980-95
Emerging Markets																				
Argentina										0.0	0.0	0.3	0.5	0.7	0.5	1.3	0.0	0.0	3.2	3.2
Brazil	0.2	0.9	1.1	0.8	0.4	0.2	0.1	0.0	0.3	0.9	1.8	0.0	0.3	2.8	2.8	6.7	3.6	3.1	12.6	19.2
Chile					0.3	0.1	0.4	0.3	0.5	0.6	0.5	0.7	0.8	1.0	2.1	3.7	0.5	2.3	8.4	11.2
China		0.0	0.0	0.0	0.0	0.2	0.9	1.6	1.7	1.6	1.3	1.3	1.0	0.0	9.0		0.2	7.2	11.3	18.6
Colombia	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.2	0.5	0.8	0.4	0.4	1.5	2.4
Greece								0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.1	0.1	0.1
Hungary																	0.0	0.0	0.0	0.0
India						0.1	0.1	0.0	0.2	0.2	0.1	0.2	0.3	0.3	0.2		0.1	0.7	1.0	1.7
Indonesia				0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.3	0.4	0.4	0.3	0.0	0.2	1.4	1.6
Jamaica																	0.0	0.0	0.0	0.0
Jordan	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2
Kenya															0.0		0.0	0.0	0.0	0.0
Malaysia								0.2	0.7	0.7	1.0	0.8	1.7	1.9	3.9	4.8	0.0	2.6	13.1	15.6
Mauritius											0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mexico	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	1.4	2.4	8.5	8.1	8.3	9.3	3.4	0.5	4.4	37.6	42.5
Pakistan																	0.0	0.0	0.0	0.0
Peru	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.0	0.1	0.9	1.0
Philippines	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.3	0.3	0.0	0.4	0.5	0.4	0.4	1.4	2.2
Portugal	0.0	0.0	0.0	0.1	0.1	0.2	0.5	1.7	1.0	0.8	1.4	1.0	2.0	1.8	1.4	2.7	0.4	5.5	9.0	14.5
Sri Lanka													0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thailand							0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.3	6.9	5.4	0.0	0.1	17.2	17.2
Tunisia										0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.4	0.5
Turkey			0.1	0.1	0.0	0.1	0.2	0.4	0.1	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.3	1.3	0.5	2.0
Venezuela	0.4	0.3	0.5	0.3	0.2	1.3	2.7	1.9	0.2	0.0	0.3	0.3	0.3	0.1	0.0	0.2	3.0	5.1	0.9	8.9
Total	0.7	1.3	1.9	1.6	1.3	2.6	5.4	6.5	5.3	6.9	9.4	13.7	17.5	21.2	37.8	30.2	9.4	33.6	120.3	163.2
Asian Tigers																				
HongKong									0.1	0.1	0.1	0.1	0.2	1.4	2.2	2.7	0.0	0.3	6.7	7.0
Korea	2.4	3.1	3.9	3.7	2.4	3.8	5.5	5.0	10.1	16.6	25.0	29.0	23.2	36.9	36.6	43.7	19.4	62.2	169.4	250.5
Singapore																	0.0	0.0	0.0	0.0
Taiwan		0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.4	0.2	0.4	0.8	1.5	0.4	0.5	3.2	4.1
Total	2.4	3.2	4.0	3.8	2.5	3.9	5.6	5.1	10.3	16.8	25.3	29.5	23.6	38.7	39.6	47.9	19.8	63.0	179.2	262.0
G4 Industrial Countries																				
Germany	59.9	68.1	67.3	69.6	61.6	66.8	79.1	82.1	73.7	95.5	175.0	173.3	198.8	249.1	235.5	301.8	393.4	505.4	1158.6	2057.4
Japan	68.7	75.1	77.2	92.5	101.4	124.5	227.4	292.1	371.4	399.6	389.0	428.9	463.0	506.6	435.0	532.4	539.4	1679.5	2365.9	4584.1
United King	0.7	0.6	0.9	1.2	0.6	1.3	2.3	4.3	4.6	7.6	2.3	2.9	2.4	3.8	4.4	2.5	5.2	21.0	15.9	42.1
United State	55.0	36.6	42.8	44.9	72.6	118.3	230.9	205.9	310.6	280.7	291.4	358.7	447.7	572.8	474.9	516.2	370.2	1319.5	2370.3	4060.0
Total	184.3	180.4	188.2	208.2	236.2	310.9	539.7	584.3	760.2	783.4	857.7	963.9	1112.0	1332.3	1149.8	1352.8	1308.3	3525.3	5910.8	10744.2
Grand Total	187.5	184.9	194.1	213.7	240.1	317.4	550.8	595.9	775.8	807.1	892.3	1007.0	1153.0	1392.1	1227.2	1430.9	1337.5	3621.9	6210.3	11169.6

Table A6. Equity/GDP in %

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1980-85	1986-90	1991-95	1980-95
Emerging Markets																				
Argentina	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.4%	0.3%	0.1%	0.0%	0.1%	0.2%	0.1%
Brazil	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%	0.4%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.2%	0.5%	0.3%	0.2%	0.2%	0.3%	0.2%
Chile					0.4%	1.8%	1.4%	4.5%	2.3%	1.0%	0.8%	0.5%	1.1%	1.8%	0.2%	2.1%	1.1%	2.0%	1.1%	1.5%
China		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.2%	0.0%		0.0%	0.1%	0.1%	0.0%
Colombia	0.1%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	0.3%	0.2%	0.1%	0.1%	0.2%	0.2%	0.4%	0.8%	0.3%	0.3%	0.2%	0.4%	0.3%
Greece	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.4%	0.5%	0.1%	1.4%	0.9%	0.2%	0.5%	1.1%	0.3%	0.1%	0.5%	0.6%	0.4%
Hungary			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.3%	0.9%	2.3%	0.0%	0.0%	0.9%	0.3%
India		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.2%		0.0%	0.0%	0.1%	0.1%
Indonesia	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	2.7%	0.4%	0.8%	1.5%	2.8%	2.0%	0.0%	0.8%	1.5%	0.7%
Jamaica	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.2%	0.1%	0.0%	0.0%	1.3%	1.1%	0.3%	0.1%	0.0%	0.2%	0.6%	0.2%
Jordan	4.1%	5.2%	5.4%	3.5%	0.3%	0.5%	0.5%	1.3%	0.3%	0.9%	0.4%	0.7%	1.6%	5.9%	10.9%	6.5%	3.2%	0.7%	5.1%	3.0%
Kenya					0.0%	0.0%	0.1%	0.0%	0.2%	0.2%	0.2%	0.1%	0.2%	0.0%	0.7%	0.0%	0.0%	0.1%	0.2%	0.1%
Malaysia	0.3%	1.6%	1.0%	1.7%	2.5%	0.8%	0.6%	1.1%	1.1%	1.6%	7.3%	2.1%	5.4%	2.1%	3.9%	4.3%	1.3%	2.3%	3.6%	2.3%
Mauritius											0.4%	0.2%	3.4%	0.2%	3.9%	2.6%	0.0%	0.4%	2.1%	1.8%
Mexico	0.0%	0.0%			0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.1%	1.2%	0.5%	0.7%	0.5%	0.0%	0.0%	0.1%	0.6%	0.2%
Pakistan	0.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.9%	0.2%	1.1%	0.3%	0.1%	0.1%	0.5%	0.2%
Peru	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines	0.6%	1.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.2%	0.3%	0.3%	0.6%	0.9%	0.2%	0.8%	2.3%	2.0%	0.3%	0.3%	1.2%	0.6%
Portugal							1.0%	2.1%	3.0%	2.6%	4.0%	2.8%	3.2%	3.0%	2.3%	4.2%	0.0%	2.5%	3.1%	2.8%
Sri Lanka								0.1%	0.2%	0.1%	0.2%	0.2%	0.7%	1.0%	1.9%	0.5%	0.0%	0.1%	0.9%	0.5%
Thailand	0.3%	0.2%	0.3%	0.3%	0.9%	0.5%	0.2%	2.4%	0.7%	7.1%	6.1%	6.4%	8.0%	1.1%	2.3%	1.6%	0.4%	3.3%	3.9%	2.4%
Tunisia	1.5%	7.5%	3.2%	4.6%	4.7%	2.0%	2.8%	1.5%	1.5%	2.0%	3.4%	3.1%	3.4%	2.9%	2.7%	5.1%	3.9%	2.2%	3.4%	3.2%
Turkey			0.1%	0.2%	0.3%	0.3%	0.2%	0.3%	0.3%	0.4%	1.0%	0.7%	0.5%	0.5%	1.0%	0.7%	0.2%	0.4%	0.7%	0.5%
Venezuela	0.5%	0.2%	0.2%	0.3%	0.2%	0.2%	0.4%	0.5%	1.3%	1.6%	1.0%	2.3%	1.3%	1.3%	1.2%	0.9%	0.3%	1.0%	1.4%	0.8%
Total	0.5%	1.0%	0.6%	0.6%	0.5%	0.3%	0.4%	0.7%	0.5%	0.9%	1.3%	1.0%	1.4%	1.1%	1.7%	1.6%	0.6%	0.7%	1.4%	0.9%
Asian Tigers																				
HongKong					0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	5.6%	13.0%	8.5%	4.2%	3.4%	0.0%	0.6%	6.9%	3.2%
Korea	0.4%	0.6%	0.5%	0.7%	0.7%	0.4%	0.9%	1.7%	5.8%	9.8%	1.6%	1.2%	1.0%	1.2%	2.0%	1.8%	0.6%	4.0%	1.5%	1.9%
Singapore	1.7%	1.9%	1.0%	0.9%	0.3%	0.6%	0.1%	1.3%	0.3%	0.3%	1.4%	0.4%	0.6%	6.3%	1.3%	0.5%	1.1%	0.7%	1.8%	1.2%
Taiwan	1.1%	0.4%	0.7%	0.4%	0.7%	0.4%	0.5%	1.0%	0.9%	1.0%	0.7%	1.1%	0.9%	1.1%	1.3%	1.2%	0.6%	0.8%	1.1%	0.8%
Total	1.1%	1.0%	0.7%	0.7%	0.4%	0.4%	0.4%	1.0%	1.7%	2.8%	1.7%	2.1%	3.9%	4.3%	2.2%	1.7%	0.7%	1.5%	2.8%	1.6%
G4 Industrial Countries																				
Germany	0.5%	0.4%	0.4%	0.4%	0.4%	0.6%	0.9%	0.6%	0.4%	0.9%	1.2%	0.5%	0.6%	0.6%	0.9%	0.7%	0.4%	0.8%	0.6%	0.6%
Japan	0.6%	0.9%	0.8%	0.6%	0.8%	0.7%	0.7%	1.8%	2.3%	3.8%	1.5%	0.3%	0.1%	0.3%	0.3%	0.2%	0.7%	2.0%	0.2%	1.0%
United Kingdom	0.4%	0.7%	0.4%	0.8%	0.5%	1.2%	2.0%	3.8%	1.2%	1.3%	0.7%	1.9%	1.0%	2.6%	2.1%	1.0%	0.7%	1.8%	1.7%	1.4%
United States	0.8%	0.8%	1.0%	1.5%	0.6%	0.9%	1.5%	1.2%	0.8%	0.6%	0.7%	1.2%	1.4%	1.9%	1.0%	1.1%	0.9%	1.0%	1.3%	1.1%
Total	0.6%	0.7%	0.6%	0.8%	0.6%	0.9%	1.3%	1.8%	1.2%	1.6%	1.0%	1.0%	0.8%	1.3%	1.1%	0.7%	0.7%	1.4%	1.0%	1.0%
Grand Total	0.6%	0.9%	0.6%	0.7%	0.5%	0.4%	0.5%	0.9%	0.8%	1.3%	1.3%	1.1%	1.7%	1.6%	1.7%	1.5%	0.6%	1.0%	1.5%	1.0%

Table A9. LT Private Sector Debt/GDP in %

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1980-85	1986-90	1991-95	1980-95
Emerging Markets																				
Argentina										0.0%	0.0%	0.1%	0.2%	0.3%	0.2%	0.5%		0.0%	0.3%	0.2%
Brazil	0.1%	0.4%	0.4%	0.4%	0.2%	0.1%	0.0%	0.0%	0.1%	0.2%	0.4%	0.0%	0.1%	0.6%	0.5%	1.0%	0.2%	0.1%	0.4%	0.3%
Chile					1.7%	0.9%	2.1%	1.6%	1.9%	2.2%	1.7%	2.2%	1.8%	2.3%	4.1%	5.5%	1.3%	1.9%	3.2%	2.3%
China		0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.6%	0.6%	0.5%	0.4%	0.3%	0.2%	0.0%	1.7%		0.0%	0.5%	0.6%	0.3%
Colombia	0.0%	0.0%	0.0%	0.2%	0.4%	0.6%	0.3%	0.2%	0.2%	0.4%	0.1%	0.0%	0.2%	0.3%	0.7%	1.0%	0.2%	0.2%	0.5%	0.3%
Greece								0.1%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%		0.0%	0.0%	0.0%
Hungary																				
India						0.0%	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%		0.0%	0.1%	0.1%	0.1%
Indonesia				0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.2%	0.3%	0.2%	0.1%	0.0%	0.0%	0.2%	0.1%
Jamaica																				
Jordan	0.0%	0.0%	1.1%	0.7%	0.5%	0.1%	0.7%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.4%	0.2%	0.1%	0.2%
Kenya															0.1%				0.1%	0.1%
Malaysia								0.5%	2.1%	1.9%	2.2%	1.7%	3.0%	3.0%	5.5%	5.6%		1.7%	3.8%	2.8%
Mauritius											0.2%	0.0%	0.0%	0.1%	0.1%	0.0%		0.2%	0.0%	0.1%
Mexico	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.2%	0.1%	0.2%	0.7%	1.0%	2.9%	2.4%	2.3%	2.5%	1.4%	0.0%	0.4%	2.3%	0.9%
Pakistan																				
Peru	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.2%	0.5%	0.6%	0.0%	0.1%	0.4%	0.2%
Philippines	0.2%	0.0%	0.4%	0.3%	0.1%	0.1%	0.4%	0.0%	0.0%	0.2%	0.3%	0.6%	0.5%	0.1%	0.6%	0.6%	0.2%	0.2%	0.5%	0.3%
Portugal	0.0%	0.0%	0.1%	0.5%	0.4%	0.7%	1.5%	4.2%	2.1%	1.6%	2.0%	1.4%	2.1%	2.2%	1.6%	2.6%	0.3%	2.3%	2.0%	1.4%
Sri Lanka													0.0%	0.0%	0.0%	0.0%			0.0%	0.0%
Thailand							0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	1.4%	2.6%	4.8%	3.2%		0.0%	2.4%	1.2%
Tunisia										0.5%	0.6%	0.3%	0.5%	0.4%	1.0%	0.5%		0.6%	0.5%	0.5%
Turkey			0.1%	0.1%	0.1%	0.1%	0.2%	0.4%	0.2%	0.3%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.3%	0.1%	0.1%
Venezuela	0.6%	0.4%	0.6%	0.4%	0.3%	2.1%	4.4%	4.0%	0.3%	0.0%	0.5%	0.5%	0.4%	0.2%	0.1%	0.2%	0.7%	1.9%	0.3%	0.9%
Total	0.1%	0.1%	0.3%	0.2%	0.3%	0.4%	0.8%	0.8%	0.5%	0.5%	0.5%	0.6%	0.7%	0.8%	1.2%	1.3%	0.2%	0.6%	0.9%	0.6%
Asian Tigers																				
HongKong									0.1%	0.2%	0.2%	0.1%	0.2%	1.2%	1.7%	1.9%		0.2%	1.0%	0.7%
Korea	3.8%	4.4%	5.2%	4.4%	2.6%	4.0%	5.1%	3.7%	5.5%	7.5%	9.9%	9.8%	7.5%	11.1%	9.6%	9.6%	4.1%	6.3%	9.5%	6.5%
Singapore																				
Taiwan		0.1%	0.1%	0.2%	0.3%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.2%	0.1%	0.2%	0.3%	0.6%	0.2%	0.1%	0.3%	0.2%
Total	3.8%	2.3%	2.7%	2.3%	1.5%	2.1%	2.6%	1.9%	1.9%	2.6%	3.4%	3.4%	2.6%	4.2%	3.9%	4.0%	2.4%	2.5%	3.6%	2.8%
G4 Industrial Countries																				
Germany	7.4%	10.0%	10.3%	10.7%	10.0%	10.8%	8.9%	7.4%	6.2%	8.1%	11.6%	10.1%	10.1%	13.1%	11.5%	12.5%	9.9%	8.4%	11.4%	9.9%
Japan	6.5%	6.4%	7.1%	7.8%	8.0%	9.3%	11.4%	12.1%	12.7%	13.8%	13.1%	12.6%	12.4%	11.8%	9.3%	10.4%	7.5%	12.6%	11.3%	10.3%
United Kingdom	0.1%	0.1%	0.2%	0.3%	0.1%	0.3%	0.4%	0.6%	0.5%	0.9%	0.2%	0.3%	0.2%	0.4%	0.4%	0.2%	0.2%	0.5%	0.3%	0.3%
United States	2.0%	1.2%	1.4%	1.3%	1.9%	2.9%	5.5%	4.6%	6.4%	5.4%	5.3%	6.3%	7.5%	9.2%	7.1%	7.4%	1.8%	5.4%	7.5%	4.7%
Total	4.0%	4.4%	4.7%	5.0%	5.0%	5.8%	6.6%	6.2%	6.5%	7.0%	7.6%	7.3%	7.6%	8.6%	7.1%	7.6%	4.8%	6.8%	7.6%	6.3%
Grand Total	1.8%	1.7%	1.8%	1.7%	1.6%	1.8%	2.3%	2.0%	1.9%	2.0%	2.1%	2.1%	2.1%	2.5%	2.6%	2.8%	1.6%	1.9%	2.3%	1.8%

Table A10. International Issues of Equity and Debt,

		US$ billion				% of GDP			
Equity		198085	198690	199195	198095	198085	198690	199195	198095
	Emerging Markets		1.4	29.3	30.7	0.0	0.0	0.2	0.1
	Asian Tigers	0.1	2.2	5.8	8.1	0.0	0.2	0.2	0.1
	G4	3.6	36.0	172.6	212.1	0.0	0.2	0.3	0.1
	Total	3.7	39.6	207.7	251.0	0.0	0.1	0.2	0.1
Debt									
	Emerging markets	1.3	0.6	45.9	47.8	0.0	0.0	0.2	0.1
	Asian Tigers	5.2	7.2	22.2	34.7	0.7	0.7	0.5	0.6
	G4	107.1	430.2	613.1	1,150.4	0.3	1.1	1.3	0.9
	Total	113.7	438.0	681.2	1,232.9	0.1	0.2	0.4	0.2

Source: Bondware.

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